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(54) **TAP WITH WATER TREATMENT DEVICE FOR WALL-MOUNTING**

(57) A delivery device (1) comprises:
- a main body (2);
- a first mixer tap (3) coupled with the main body (2);
- a second tap (4) coupled with the main body (2);
- a dispensing hose (5) movably connected to the main body (2), and rotatably adjustable, during normal operation, around a vertical axis (X) with respect to the main body (2).

On the main body (2) connecting means (6, 7) is obtained for connecting to respective sources of hot san-

itary water and cold sanitary water, and further connecting means (8) for connecting the main body (2) to a source of treated water. The connecting means (6, 7) extends along a plane (P) arranged transversely to the aforesaid vertical axis (X), and is configured for enabling the main body (2) to be fixed to a vertical wall (9). The flows of sanitary water and of treated/purified water from the inlet to the outlet of the delivery device are always maintained separate therein from one another.

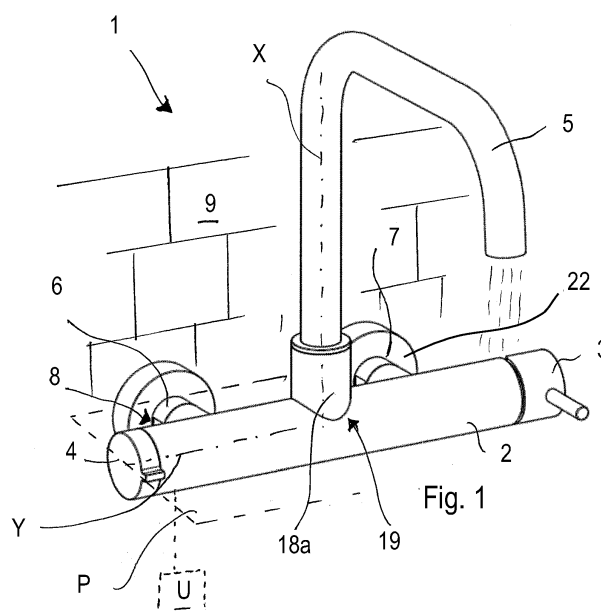


Fig. 1

Description

BACKGROUND OF THE INVENTION

[0001] This invention relates to a device for selective delivery of one or more types of liquid, in particular hot water, cold water, mixed water and treated water, and provided with a fixing system for mounting on a wall.

PRIOR ART

[0002] Devices are known for delivering hot/cold/mixed sanitary water and treated water, for example purified water with possible carbonation by carbon dioxide, which are fitted to a portion of a horizontal plane that is part of a sink or of a plane of a piece of kitchen furniture. In order to fit the above device, it is necessary to make appropriately one or more holes in the aforesaid portion of horizontal plane to enable the device to be connected to the hot and cold sanitary water conduits and to the supply pipe for the treated water connected to a filtration/refrigeration/carbonation unit located in the zone below the sink. In some cases and in certain circumstances, it is desired to avoid fitting the delivery device to the plane of the sink or kitchen, for aesthetic reasons, and because it is appropriate to avoid having to drill the horizontal plane or also for other needs. Nevertheless, currently, there are no solutions available that enable drilling or installation of the plane of the sink to be avoided unless, in a laborious, costly and also aesthetically displeasing manner, a mixer tap for the sanitary water is provided and a further distinct tap is provided that is dedicated only to delivering treated water.

OBJECTS OF THE INVENTION

[0003] One object of the present invention is to improve currently known delivery devices for delivering selectively hot/cold/mixed water and treated water, and in particular, provide a new solution that enables a multiple delivery device to be wall-mounted without the need to use additional taps for the treated water. Another object is to provide a delivery device solution that in addition to ensuring greater versatility and ease of use in the case of wall-mounted installation, also enables the general overall dimensions required in installation to be minimised.

SHORT DESCRIPTION OF THE INVENTION

[0004] The above is achieved by a delivery device according to what is defined in claim 1. In particular, a delivery device according to the invention is provided comprising:

- a main body;
- a first mixer tap coupled with said main body;
- a second tap coupled with said main body;
- a dispensing hose connected movably to said main

body, and rotatably adjustable, during normal operation, around a vertical axis with respect to said main body,

- connecting means for connecting said main body to respective sources of hot sanitary water and of cold sanitary water,
- further connecting means for connecting said main body to a source of treated water,

[0005] CHARACTERISED IN THAT said connecting means extends along a plane arranged transversely to said vertical axis, and is configured for enabling said main body to be fixed to a vertical surface, in particular to a wall.

[0006] The new device according to the invention thus enables the aforesaid drawbacks to be overcome, and in addition to being versatile, compact and practical to use is also provided with a very pleasing aesthetic appearance.

SHORT DESCRIPTION OF THE DRAWINGS

[0007] These and further features according to the present invention will be clearer from the following description with reference to the attached drawings, in which:

Figures 1 and 2 show two different embodiments of a delivery device according to the present invention; Figure 3 is a side view of another embodiment of a delivery device installed on a wall; Figure 4 is a top view of the device in figure 3; Figure 5 is a frontal view of a delivery device according to the invention; Figure 6 is a section view taken along the plane VI-VI in Figure 5; Figure 7 is a section view taken along the plane VII-VII in Figure 5; Figure 8 is a section view taken along the plane VIII-VIII in Figure 5; Figure 9 shows a main body of the delivery device; Figure 10 is a frontal view of the aforesaid main body; Figure 11 is a section view taken along the plane XI-XI in Figure 10; Figure 12 is a section view taken along the plane XII-XII in Figure 11; Figure 13 is a section view taken along the plane XIII-XIII in Figure 10; Figure 14 is a section view taken along the plane XIV-XIV in Figure 11.

DETAILED DESCRIPTION OF THE UTILITY MODEL

[0008] With reference to the attached Figures, a delivery device 1 is shown that is in particular but in a non-limiting manner suitable for domestic use, is in particular suitable for being installed in a domestic kitchen, and suitable for delivering selectively in a desired manner several types of fluid, in particular hot sanitary water, cold

sanitary water, hot and cold water mixed together and treated water. The treated water can comprise purified water/filtered water, refrigerated water, water to which carbon dioxide has been added, etc. The delivery device 1 is configured internally for maintaining always separate from one another from the inlet to the outlet the flows of sanitary water and of treated/purified water, preventing the flows from coming into contact with one another.

[0009] The device 1 comprises a main body 2 that extends with a cylindrical or parallelepipedon shape or other desired geometrical shape along a longitudinal axis Y that in normal operation, i.e. after completed installation, is arranged horizontally.

[0010] The delivery device 1 comprises a first mixer tap 3 coupled with a first end of the main body 2, provided internally with a suitable mixing cartridge, and suitable for enabling the delivery of hot/cold/thermally mixed sanitary water to be controlled.

[0011] The delivery device 1 comprises a second tap 4 coupled with said main body 2, and suitable for delivering the treated water, the latter being supplied by a purification and/or refrigeration and/or water carbonation unit U.

[0012] To the main body 2 a dispensing hose 5 is connected movably, through which the various aforementioned types of liquid are delivered selectively. The dispensing hose 5 is rotatably adjustable with respect to the aforesaid main body 2 around a vertical axis X in such a manner as to enable, during normal operation, a user to direct the jet of water in a desired position.

[0013] The delivery device 1 is provided with connecting means 6, 7 for connecting the main body 2 to respective sources of hot sanitary water and of cold sanitary water. Advantageously, the connecting means 6, 7 is configured for enabling the main body 2 to be fixed to a desired vertical surface 9, such as in particular a wall. The connecting means 6, 7 extends along a plane P arranged transversely to said vertical axis X, in particular along a plane P arranged orthogonally to the aforesaid vertical axis X. In other words, the connecting means 6, 7, is configured for extending, during normal operation of the delivery device 1, horizontally.

[0014] The connecting means comprises a first connection 6 for supplying the hot water and a second connection 7 for supplying the cold water. The first connection 6 and the second connection 7 are distinct and separate from one another and extend according to respective axes A1, A2 which, in the installed operating configuration, are thus oriented orthogonally to a vertical plane, i.e. they are horizontal.

[0015] The first 6 and second 7 connections comprise respective seats into which suitable tubular portions of conduit are screwed for the passage of the respective hot and cold liquid. Such conduit portions are configured for being coupled, by suitable hexagonal nuts, with suitable threaded unions (for example eccentric threaded elements) that are fitted protruding from the respective pipes, on the wall 9, which convey the hot water and cold

water of the domestic network. The first 6 and second 7 connections further comprise respective circular cover elements 22, which are discoidal or crown-shaped or have another desired shape, which are axially slidable along the tubular conduit portions 6, 7 and are suitable for performing a protective and aesthetic covering function in the joining zones that are made between the delivery device 1 and the wall 9.

[0016] In the main body 2 a first path 10 is defined internally for the hot water and a second path 11 is defined for the cold water, which paths extend from the respective zones from which the connections 6 and 7 lead, to enable the hot and cold water to flow to the first mixer tap 3. In the main body 2 a third path 12 is also defined for the mixed hot/cold water exiting said first mixer tap 3, and connecting the first mixer tap 3 to the dispensing hose 5.

[0017] As already mentioned, the first mixer tap 3, the second tap 4 and the internal channels dedicated respectively to the sanitary water (supplied by the water network) and to the treated/purified water (supplied by the purification and/or refrigeration and/or carbonation unit U), are configured for keeping the aforesaid different types of fluid separate from one another.

[0018] The delivery device 1 comprises further connecting means 8 for connecting the main body 2 to a source of treated water, in particular to the water carbonation and/or refrigeration and/or purification unit U.

[0019] The further connecting means, obtained on the main body 2, comprises a connection portion 8 that is distinct and separate from the first 6 and second 7 connections, and configured for being connected to a supply pipe connected to a unit U. In the embodiments shown in the attached figures, the connection 8 portion is provided near the first connection 6, in particular on a rear zone of the main body 2; nevertheless, the connection portion 8 can be provided on other desired zones of the main body 2.

[0020] In the main body 2 a fourth path 13 is defined for the treated water, which places the connection 8 portion in fluid communication with the second tap 4 and the latter with the dispensing hose 5.

[0021] In the dispensing hose 5 a first delivery conduit 14 is defined for the cold/hot/mixed sanitary water exiting the first mixer tap 3, and second delivery conduit 15 is defined for the treated water exiting the second tap 4.

[0022] The first delivery conduit 14 and the second delivery conduit 15 are configured for keeping the respective fluids separate from one another that traverse the first delivery conduit 14 and second delivery conduit 15.

[0023] The first delivery conduit 14 and the second delivery conduit 15 extend along the dispensing hose 5 as far as a first outlet port 16 and a second outlet port 17 respectively. According to certain possible embodiments of a dispensing hose 5, the first delivery conduit 14 and the second delivery conduit 15 extend along the dispensing hose 5 in a mutually distinct and parallel manner. According to other possible embodiments, the first delivery conduit 14 and the second delivery conduit 15 extend

coaxially to one another, with one of the aforesaid conduits 14 or 15 that extend inside the other conduit 15 or 14.

[0024] According to certain possible embodiments of device 1, shown in figures 1, 3, 4, the dispensing hose 5 is coupled with the main body 2 by a bush portion 18 that protrudes vertically upwards from an upper zone 19 of the main body 2.

[0025] According to other possible embodiments of the device shown in figures 2, 5-8, the dispensing hose 5 is coupled with the main body 2 by a bush portion 18 that protrudes vertically downwards from a lower zone 20 of the main body 2.

[0026] Owing to the particular structural configuration of the delivery device 1, in particular owing to the connecting means 6, 7, obtained with a lying configuration according to a horizontal plane on the main body 2, and owing to the further connecting means 8 incorporated into the aforesaid main body 2, it is possible to install the device 1 easily on a vertical wall or load-bearing wall of a kitchen, thus avoiding having to make undesired holes on the sink plane or kitchen plane, making it unnecessary to use an addition tap dedicated only to delivering treated water. Thus, with the present delivery device 1 provided with fixing system for wall mounting, the present objects are reached and the drawbacks stated above are overcome. All this is achieved thanks to a convenient, effective, versatile solution with compact dimensions with aesthetically pleasing geometrical shapes.

[0027] Further versions of and/or variations on what has been disclosed and illustrated in the attached drawings are possible.

[0028] Various elements can be replaced by further technically equivalent elements without thereby falling outside the scope of the invention.

[0029] It is possible to configure and dimension the delivery device 1 in the desired manner according to the particular application for which it is intended. Lastly, the materials used for the construction of the device 1 can be chosen according to need provided that they are suitable for the specific use for which they are intended.

Claims

1. Delivery device (1) comprising:

- a main body (2);
- a first mixer tap (3) coupled with said main body (2);
- a second tap (4) coupled with said main body (2);
- a dispensing hose (5) connected movably to said main body (2), and rotatably adjustable, during normal operation, around a vertical axis (X) with respect to said main body (2),
- connecting means (6, 7) for connecting said main body (2) to respective sources of hot san-

itary water and of cold sanitary water,

- further connecting means (8) for connecting said main body (2) to a source of treated water,

CHARACTERISED IN THAT said connecting means (6, 7) extends along a plane (P) arranged transversely to said vertical axis (X), and is configured for enabling said main body (2) to be fixed to a vertical surface (9), in particular a wall.

2. Delivery device according to claim 1, wherein said connecting means (6, 7) comprises a first connection (6) for supplying the hot water and a second connection (7) for supplying the cold water, said first connection (6) and said second connection (7) being distinct and separate from one another and projecting according to respective axes (A1; A2) which, in the installed operating configuration, are oriented orthogonally to a vertical plane.
3. Delivery device according to claim 1 or 2, wherein said further connecting means (8) comprises a connection (8) portion that is distinct and separate from said connecting means (6, 7) and is obtained on said main body (2).
4. Delivery device according to any preceding claim, wherein in said main body (2) a first path (10) is defined for the hot water and a second path (11) for the cold water that extend to enable the cold and hot water to flow to said first mixer tap (3), in said main body (2) a third path (12) being defined for the mixed hot/cold water exiting said first mixer tap (3), said third mixer path (12) connecting said first mixer tap (3) to said dispensing hose (5).
5. Delivery device according to claim 4, wherein in said main body (2) a fourth path (13) for the treated water is defined, which connects said further connecting means (8) to said second tap (4) and to said dispensing hose (5), said fourth path (13) being configured for maintaining the flow of treated water separate from the flow of sanitary water.
6. Delivery device according to any preceding claim, wherein in said dispensing hose (5) there is defined a first delivery conduit (14) for the cold/hot/mixed sanitary water exiting said first mixer tap (3), and a second delivery conduit (15) for the treated water exiting said second tap (4), said first conduit (14) and second delivery conduit (15) being configured for maintaining separate, and preventing a communication of fluid between, sanitary water and treated water.
7. Delivery device according to claim 6 wherein said first delivery conduit (14) and said second delivery conduit (15) extend inside said dispensing hose (5)

as far as a first outlet port (16) and a second outlet port (17) respectively.

8. Delivery device according to claim 7 wherein said first delivery conduit (14) and said second delivery conduit (15) extend inside said dispensing hose (5) in a mutually distinct and parallel manner. 5
9. Delivery device according to claim 7, wherein said first delivery conduit (14) and said second delivery conduit (15) extend coaxially to one another, one of said conduits (14;15) extending inside the other conduit (15;14). 10
10. Delivery device according to any preceding claim, wherein said further connecting means (8) enables a supply pipe connected to a purification and/or refrigeration and/or water carbonation unit (U) to be connected to said main body (2). 15
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11. Delivery device according to any preceding claim, wherein said dispensing hose (5) is coupled with said main body (2) by a bush portion (18) that protrudes vertically upwards from an upper zone (19) of said main body (2), or extends downwards from a lower zone (20) of said main body (2). 25

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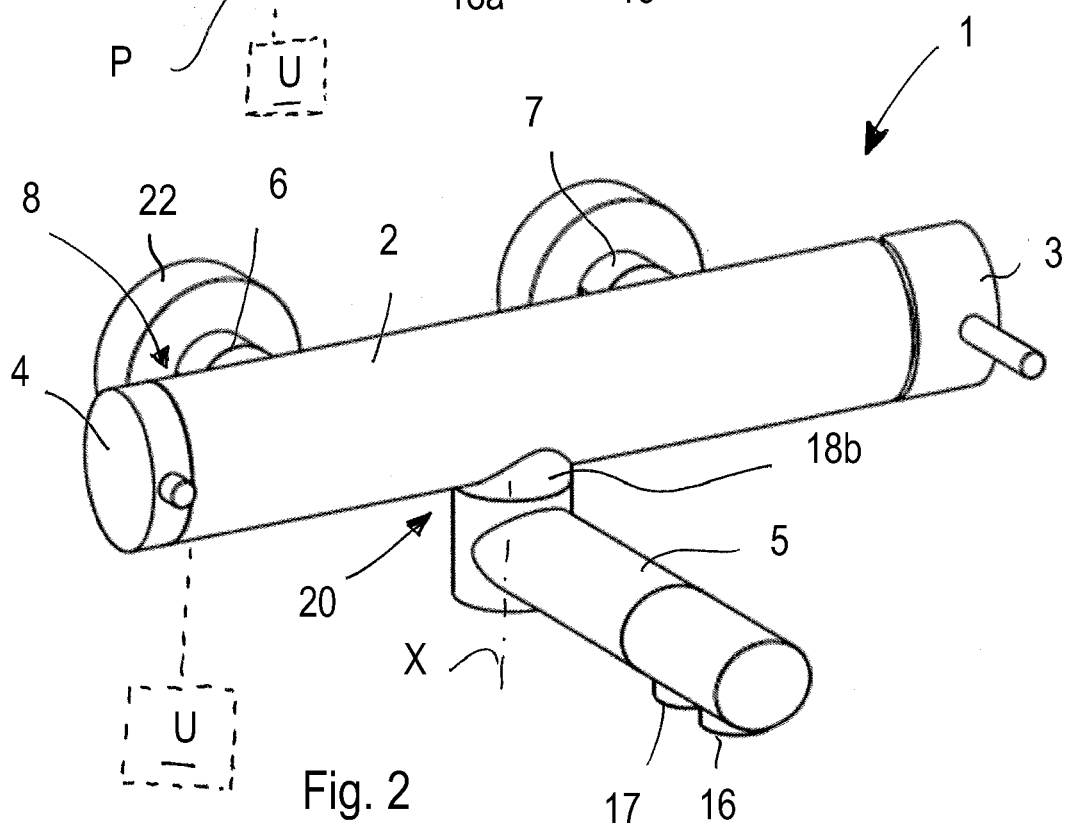
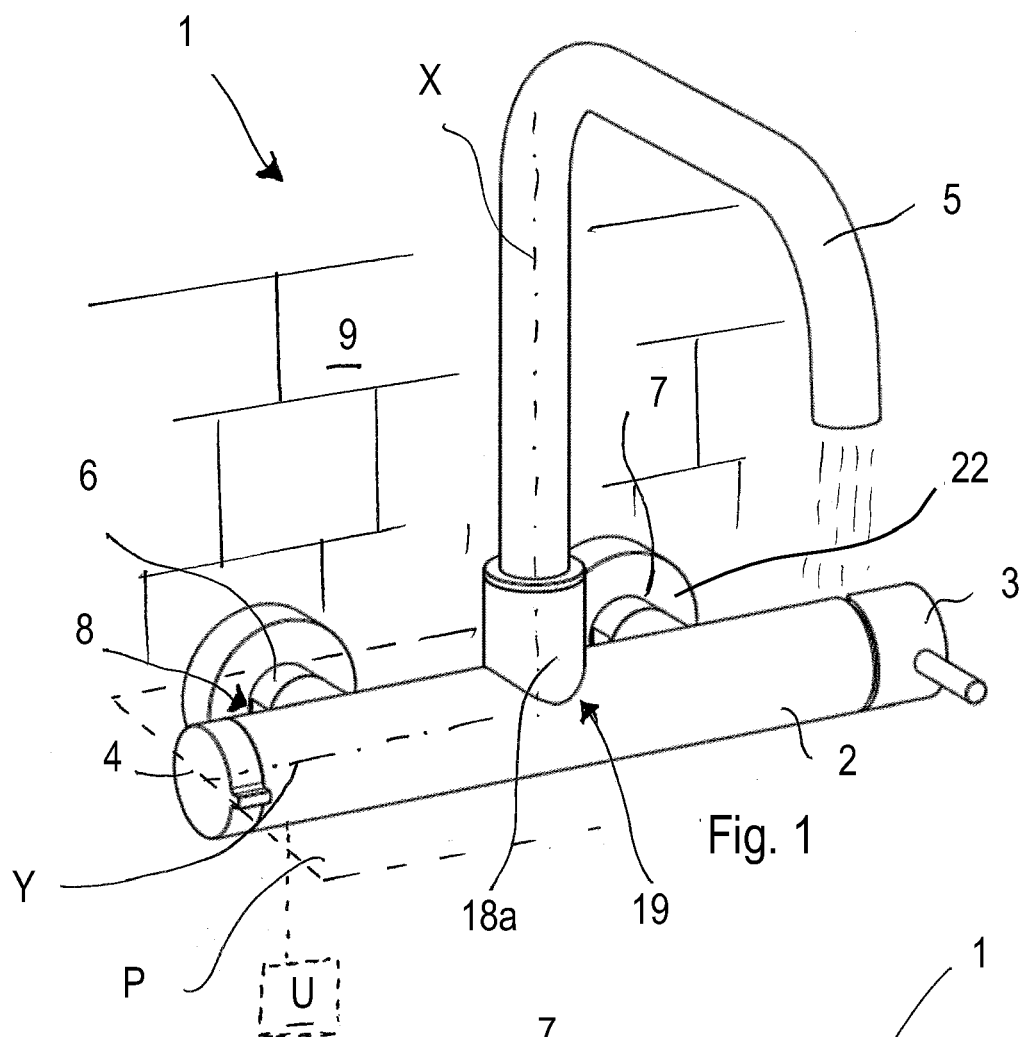
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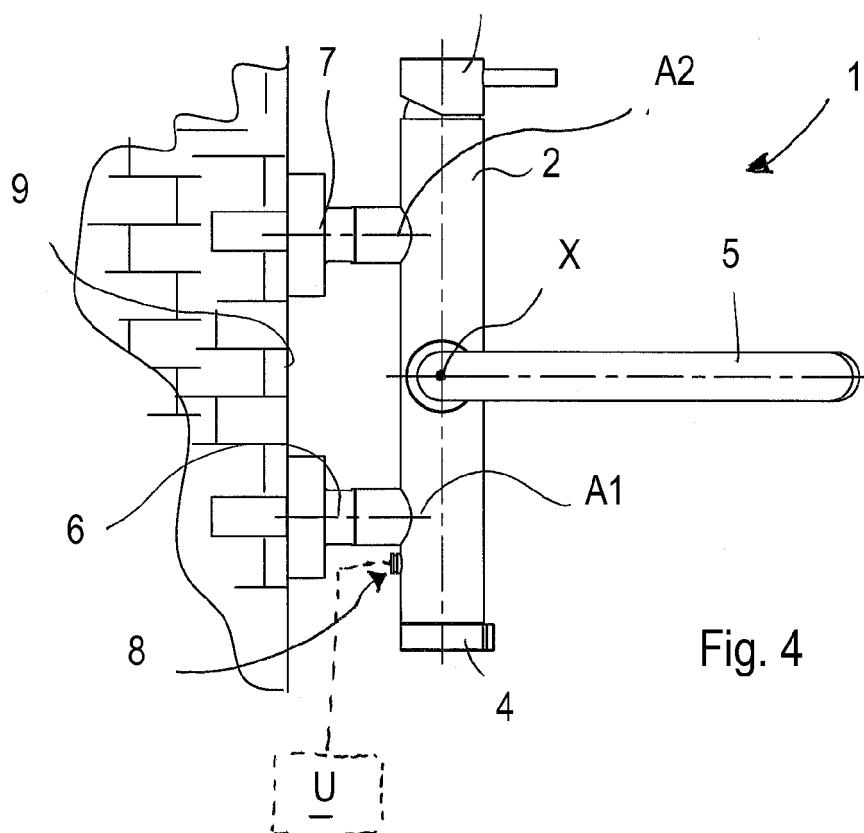
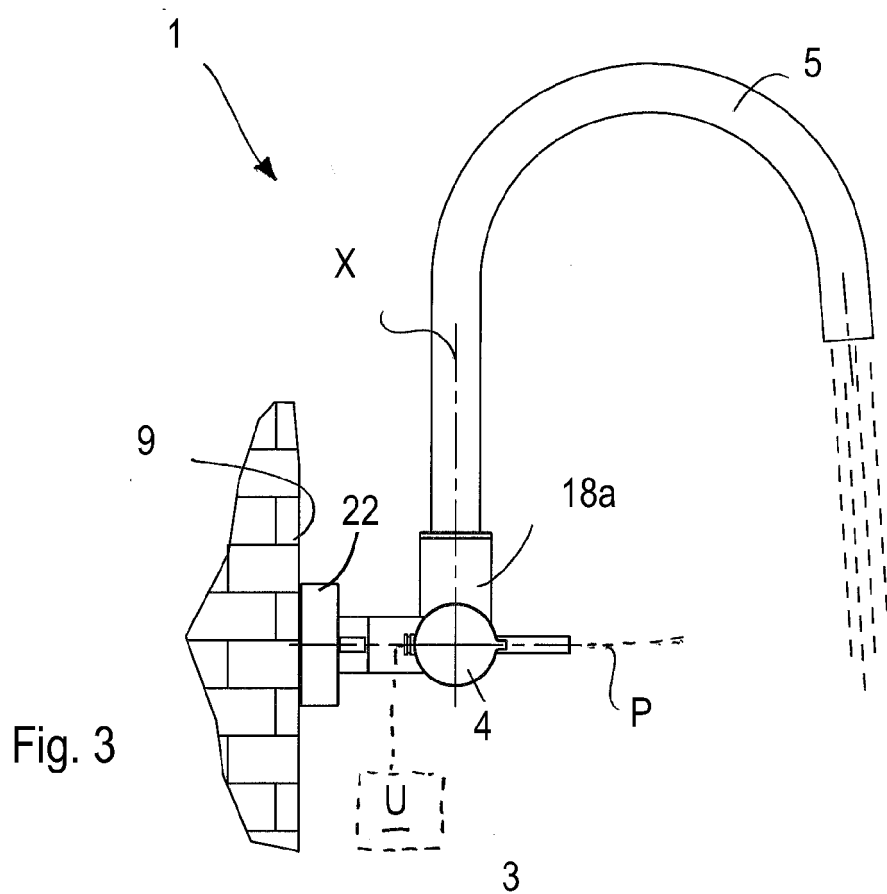
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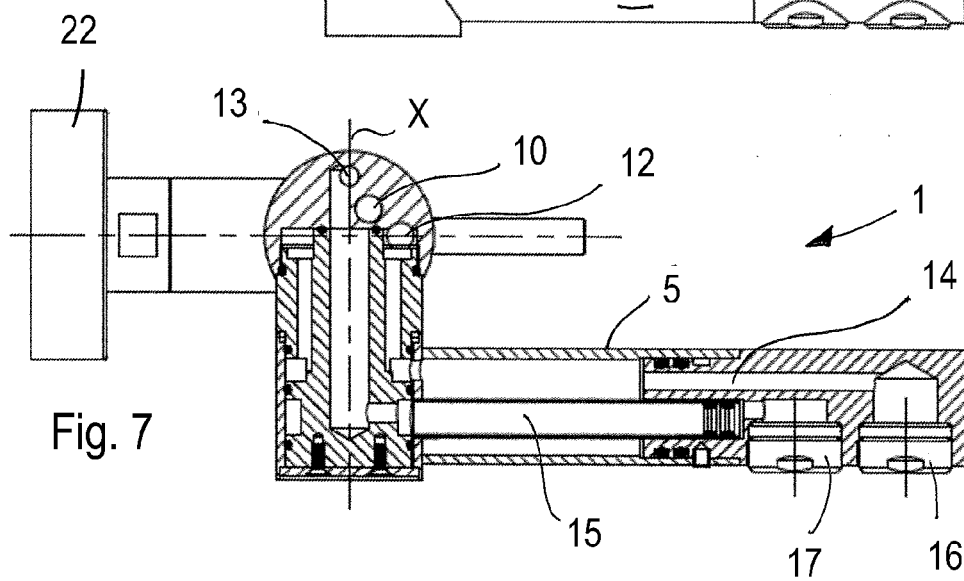
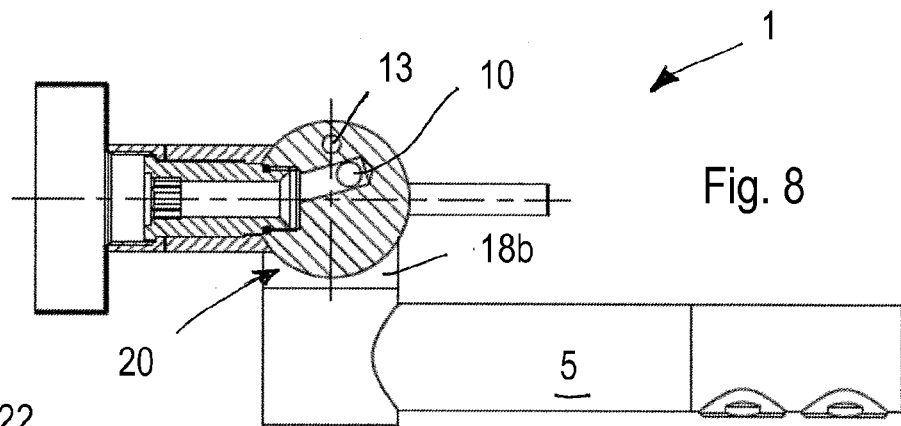
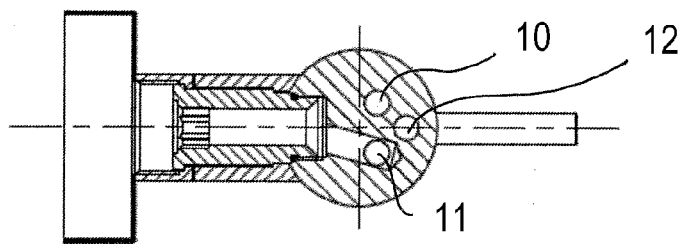
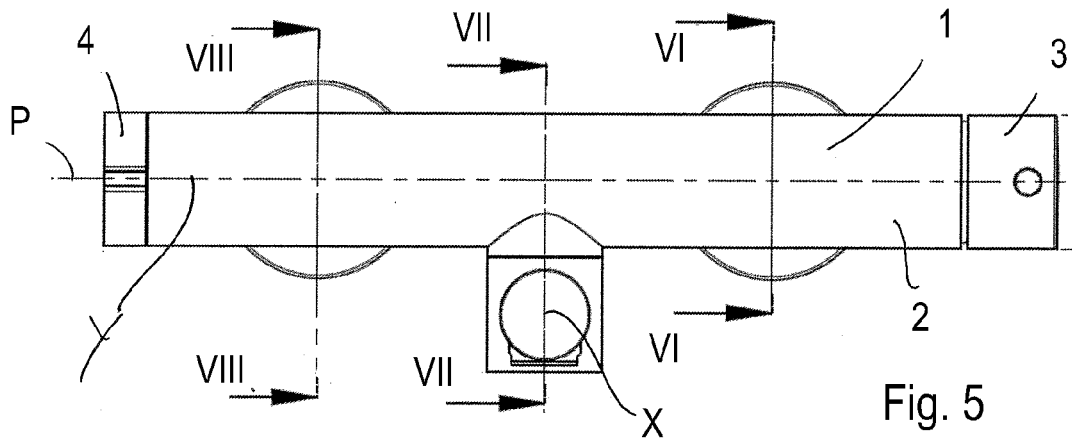
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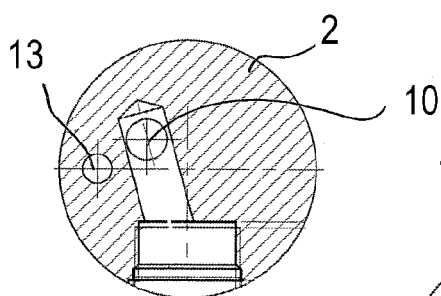
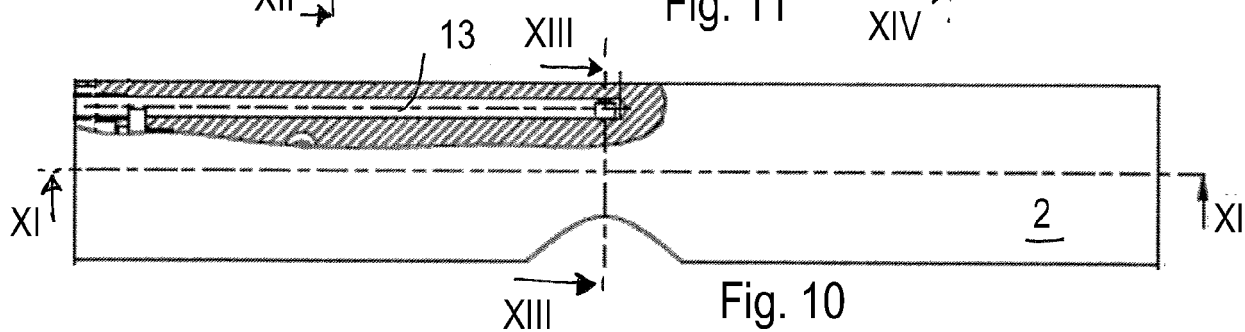
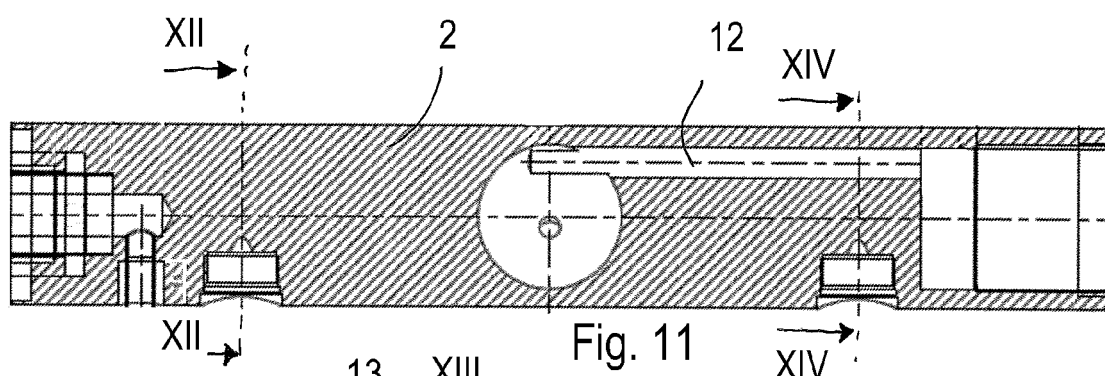
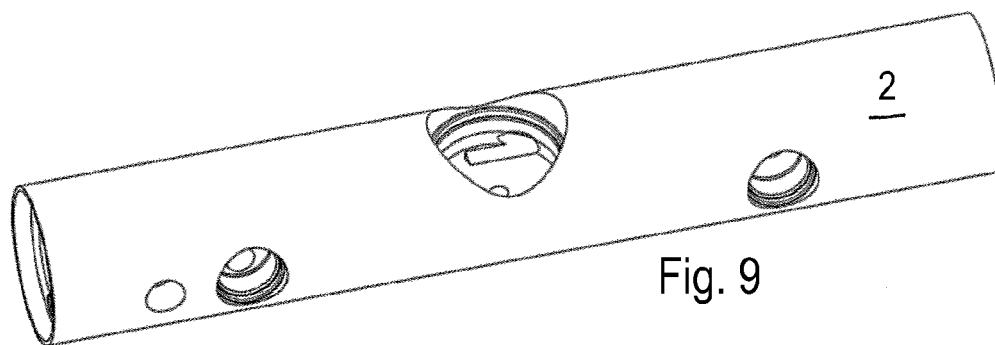


Fig. 12

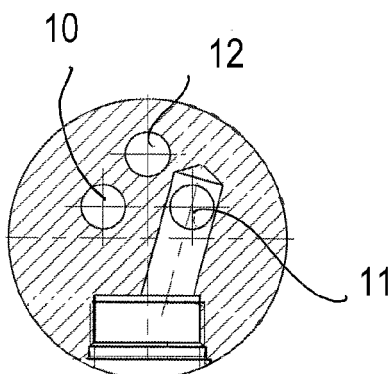


Fig. 14

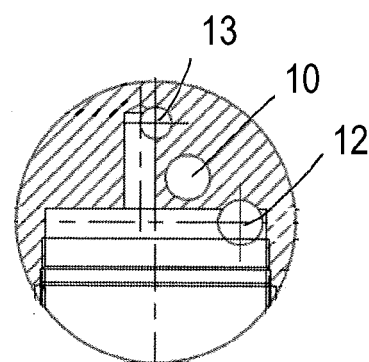


Fig. 13



EUROPEAN SEARCH REPORT

Application Number
EP 17 18 1390

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	CN 203 309 268 U (TAN QINGBAI) 27 November 2013 (2013-11-27) * figure 2 *	1-11	INV. E03C1/04
Y	EP 2 884 012 A1 (GM RUBINETTERIE S R L [IT]) 17 June 2015 (2015-06-17) * the whole document *	1-11	
Y	US 1 572 412 A (VALLIER ORVIS W) 9 February 1926 (1926-02-09) * the whole document *	1-11	
Y	EP 0 577 164 A1 (TELMA GUZZINI S R L [IT]) 5 January 1994 (1994-01-05) * the whole document *	1-11	
A	EP 2 975 185 A1 (BLANCO GMBH & CO KG [DE]) 20 January 2016 (2016-01-20) * the whole document *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			E03C
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 29 November 2017	Examiner Horst, Werner
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 17 18 1390

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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29-11-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
CN 203309268 U	27-11-2013	NONE	
EP 2884012 A1	17-06-2015	DK 2884012 T3 EP 2884012 A1	27-02-2017 17-06-2015
US 1572412 A	09-02-1926	NONE	
EP 0577164 A1	05-01-1994	AT 143709 T DE 69305113 D1 DE 69305113 T2 EP 0577164 A1 ES 2092747 T3 IL 105625 A IT MI920560 U1 US 5293901 A	15-10-1996 07-11-1996 13-02-1997 05-01-1994 01-12-1996 31-12-1995 03-12-1993 15-03-1994
EP 2975185 A1	20-01-2016	DE 102014109822 A1 EP 2975185 A1	14-01-2016 20-01-2016